



*Better Buildings Residential Network  
Peer Exchange Call Series*

*The Big Heat Pump Push:  
How Are Programs, Contractors, and the Grid Responding?*

*December 8, 2022*

# Agenda and Ground Rules

- Agenda Review and Ground Rules
- Residential Network Overview and Upcoming Call Schedule
- Opening Poll
- Featured Speakers
  - **Courtney Moriarta**, New York State Energy Research & Development Authority
  - **Zachary Strauss**, Atlas Public Policy
- Open Discussion
- Closing Poll and Announcements

## Ground Rules:

1. **Sales of services and commercial messages are not appropriate** during Peer Exchange Calls.
2. Calls are a safe place for discussion; **please do not attribute information to individuals** on the call.

*The views expressed by speakers are their own, and do not reflect those of the Dept. of Energy.*

# Better Buildings Residential Network

## Join the Network

### Member Benefits:

- Recognition in media, social media and publications
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- One-on-One brainstorming conversations

### Commitment:

- Members only need to provide *one number*: their organization's number of residential energy upgrades per year, or equivalent.

### Upcoming Calls (2<sup>nd</sup> & 4<sup>th</sup> Thursdays):

- *1/12: Public Roundtable – The Inflation Reduction Act (IRA): Residential Energy Rebates and Contractor Training Program*
- *1/26: Right-Sizing Equipment Vs. Wrong-Sizing – How Not to Waste Energy*

Peer Exchange Call summaries are posted on the Better Buildings [website](#) a few weeks after the call



**Courtney Moriarta**  
*New York State Energy Research & Development Authority*

# BBRN Peer Exchange: The Big Heat Pump Push – How Programs, Contractors, and the Grid are Responding

Courtney Moriarta, Director of Single Family Residential  
December 2022



**NYSERDA**

# NYS Climate Leadership and Community Protection Act of 2019 (Climate Act)

## **Establishes the most aggressive GHG reduction goals of any major economy**

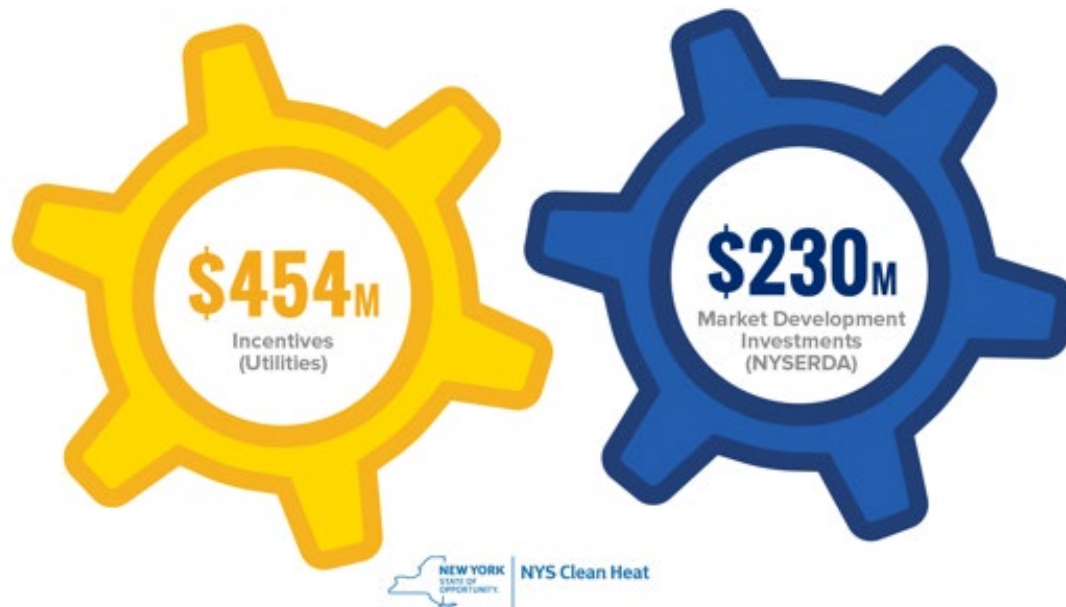
- GHG Reduction Goals: 40% by 2030, 85% by 2050
- 70% renewable energy by 2030, 100% zero emission electricity by 2040
- Commitments to environmental justice, disadvantaged communities, and just transition
- Establishes the state's first Climate Action Council, Final Scoping Plan due December 2022

## **2022 Policy: Develop a Plan for 2 Million Climate Friendly Homes by 2030**

- > 1 million fully electrified homes
- > 1 million electrification-ready homes
- > 800,000 of the 2 million to be LMI households
- > Multi-agency effort (NYSERDA, DPS, HCR, DOS)

# New Efficiency New York and NYS Clean Heat

**NYSERDA and utilities working together to impact the market with nearly \$700 million in investments**





## Build Consumer Demand

- **Statewide Marketing Campaign:** Increase awareness and education and promote benefits while supporting the supply chain with resources and cooperative advertising
- **Community Outreach:** Support local grassroots education, awareness, lead generation and aggregation campaigns
- **Critical Tools:** Assess project feasibility, accelerate customer decision-making, and lower acquisition costs
- **Technical Assistance:** Residential energy audits, no-cost technology screenings or feasibility studies for large buildings

# Heat Pump Planner

PDF version  
launched in 2021

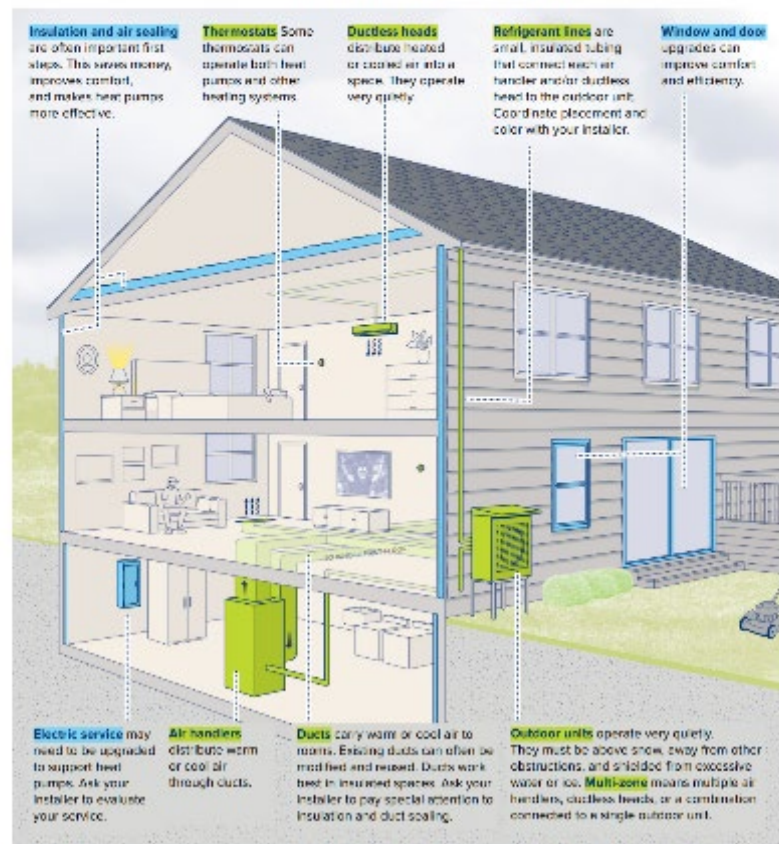
Interactive version  
launched October  
2022

[nyscrda.ny.gov/all-programs/Heat-Pump-Planner/Heat-Pump-Planner](https://nyscrda.ny.gov/all-programs/Heat-Pump-Planner/Heat-Pump-Planner)

## Multi-Zone Heat Pump for a Two-Story Home

Heat pumps use electricity to provide clean, efficient heating and cooling.

- **Proven technology** heats and cools homes year-round across New York State
- **One system** provides comfort in both summer and winter
- **Healthy and safe** with no fuels, carbon monoxide, or window air conditioners
- **Affordable** with rebates, financing options, and low operating costs
- **Clean and green** with reduced greenhouse gas emissions
- **Versatile** solution for new or existing homes



HEAT PUMP PLANNER

MORE ABOUT MULTI-ZONE HEAT PUMPS >

## Multi-Zone Air Source Heat Pumps

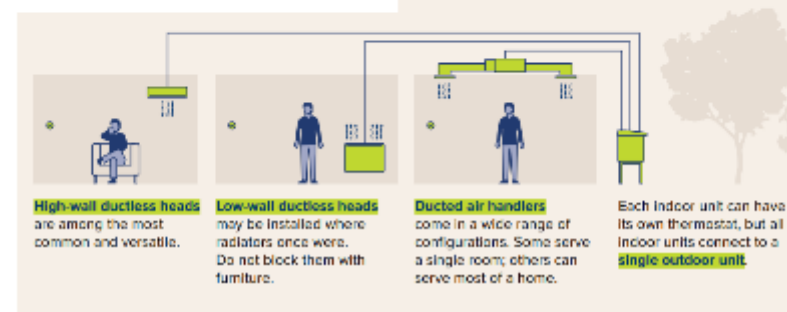
key considerations

### Features

- Save space outdoors with multiple indoor units connected to one outdoor unit
- Control temperature in different areas of the home
- Options for both ducted and ductless heating and cooling
- Quiet and efficient operation
- Eliminate window air conditioners

### Types of Indoor Units

Multi-zone heat pumps allow you to "mix and match" ducted air handlers and ductless "heads." Each should be sized to meet specific heating and cooling needs of the space it serves. Your installer can suggest the best options based on those needs, configuration of the home, and location of ducts (if present). Options include:



### Ask Your Installer

- What size units do I need? Ask for room-by-room heating and cooling calculations.
- Can heat pumps sufficiently heat my home or is an additional system needed?
- What is the best location for each indoor unit? Can we avoid heads directly above where people sit or sleep?
- What are my options for locating the outdoor unit(s)?
- How long will installation take? Where and when will you need access?
- How do I operate my system for optimal comfort and efficiency?
- What maintenance is required? How often should I clean or change air filters? Is annual service needed?
- What is the expected lifespan and warranty?

### Cost Considerations

#### Installation Cost

- Check with NYSERDA, your electric company, and installer for incentives and financing options as larger incentives may be available for eligible customers.
- Each zone adds cost, so use fewer zones when practical
- Cost varies with region, heat pump size, manufacturer, installation complexity, and installer experience

#### Operating Cost

- Your overall heating costs will likely decrease if switching from oil, propane, or electric baseboard
- If you previously heated with fuel, don't be surprised to see electric bills rise; however, gas, oil, or propane bills will drop or disappear
- Efficient homes (windows, doors, insulation, air sealing) have much lower operating costs



NYS Clean Heat



## Support low- to moderate-income (LMI) households

- **Develop Best Practices:** Outline heat pump types and install process for common LMI building types
- **Demonstrations and Pilots:** Identify replicable models for heat pump deployment
- **Financial Support:** Test out models for providing financial incentives and integrated energy-efficiency heat pump solutions for LMI households
- **Education:** Teach consumers how to operate and maintain heat pump systems

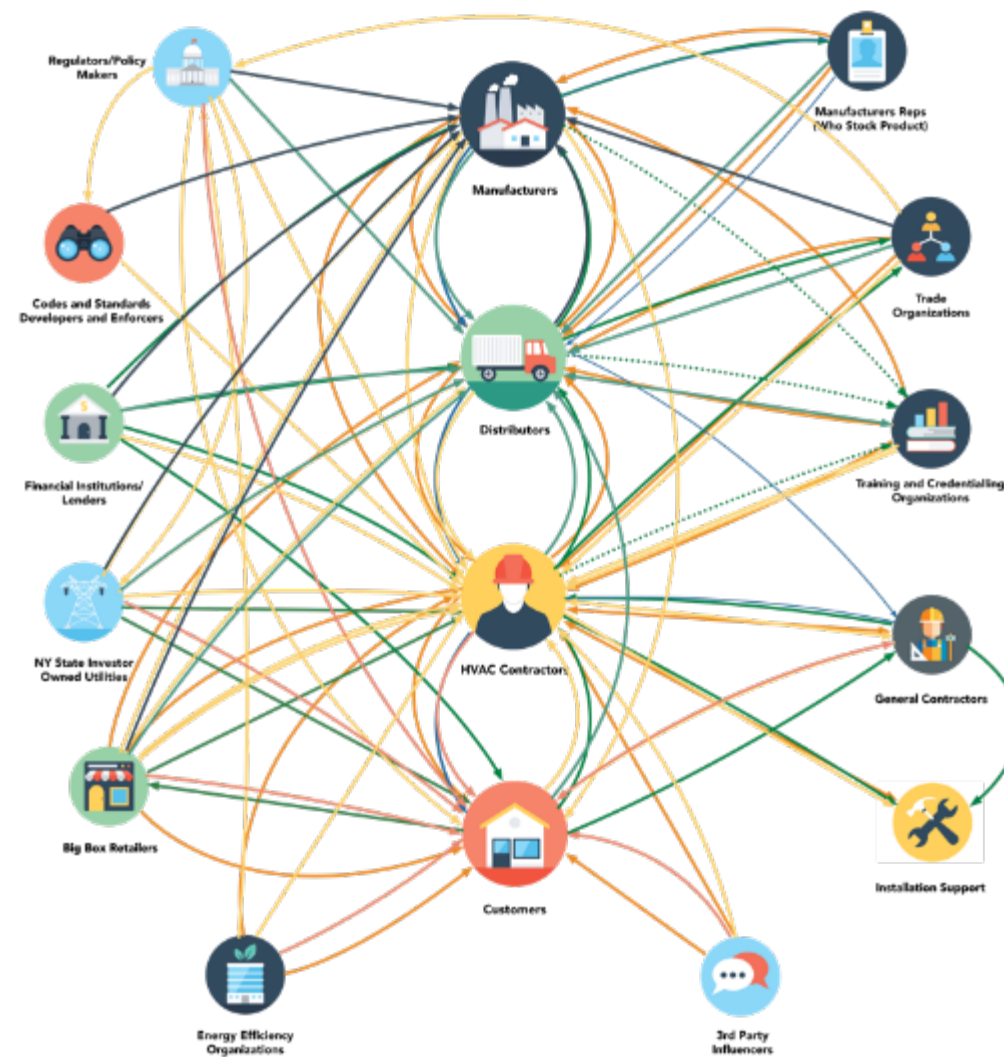
\$5 Million LMI heat pump demonstration study  
\$23 Million dedicated to electrification for HEAP recipients

# Build Supply Chain

- **Market Insight:** Collect input from distributors, vendors, and original equipment manufacturers to identify opportunities and strategies
- **Partnerships:** Align with utilities to engage heat pump manufacturers and distributors directly to increase investment and accelerate uptake
- **Trade Ally Support:** Provide business development support, tools, and resources



# HVAC Ecosystem



# HVAC Ecosystem Map

## Contractor: Profile

### Characteristics

Though there are different kinds of HVAC Contractors responsible for the installation, service and maintenance of air conditioners and heat pumps. Businesses are smaller companies, one person may manage

Some HVAC contractors may choose to narrow their focus determined by local market demand and hours of service contracts and consider their customer base. A long-time service customer is very likely to be a repeat system installations are the largest source of revenue. In New York State, there are no statewide regulations and leaves much of the repair and installation licenses include:

- New York City
- Buffalo
- Ithaca
- Syracuse
- Albany



## Motivations to Install Technology

From the [RBSA HVAC Market Assessment](#):

When asked to rate the significance of particular motivators for respondents to install air-source heat pumps, the top three were:

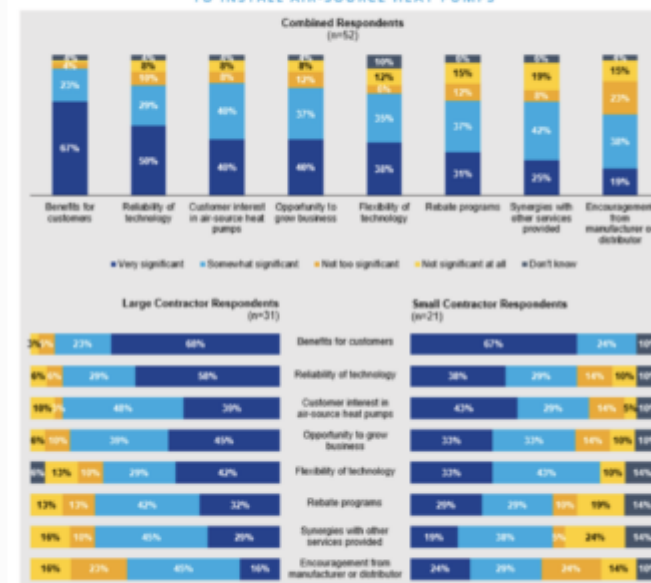
- Benefits for customers
- Customer interest in the technology
- Reliability of the technology.

Figure 26 shows that 90% of respondents rated benefits for customers as significant, with 67% specifically rating it as very significant. Eighty percent rated customer interest in air-source heat pumps as significant, with 40% specifically rating it as very significant. 79% of respondents rated reliability of technology as significant, with 50% specifically rating it as very significant. Large and small contractors differed somewhat on their top three significant motivators. **Benefits for customers emerged as the top motivator for both types of contractors.** However, large contractors rated **reliability of technology** and **opportunity to grow business** as their other top motivators. Small contractors rated customer interest and reliability of technology as their other top motivators.

[Click for link to RBSA MHVAC Market Assessment](#)

Open link

FIGURE 26. SIGNIFICANCE OF MOTIVATORS FOR CONTRACTORS TO INSTALL AIR-SOURCE HEAT PUMPS



Note: percentages shown are not weighted.

Source: HVAC contractor survey. Question, "Please rate how significant of a motivator each was for your business. Tell me if it was very significant, somewhat significant, not too significant, or not significant at all as a motivator for your business when you began installing air-source heat pumps."

# HVAC Ecosystem Map

## Contractor: Profile

### Characteristics

Though there are different kinds of HVAC Contractors depending on the company size and services offered - at their core - they are responsible for the installation, service and maintenance of heating and cooling systems in homes which include furnaces, boilers, air conditioners and heat pumps. In smaller companies, one person may handle all aspects of the business.

Some HVAC contractors may be determined by local market conditions, service contracts and considerations. A long-time service customer system installations are the top priority, and helps to assure that in New York State, there are and leaves much of the repair licenses include:

- New York City
- Buffalo
- Ithaca
- Syracuse
- Albany



### Actor Interactions



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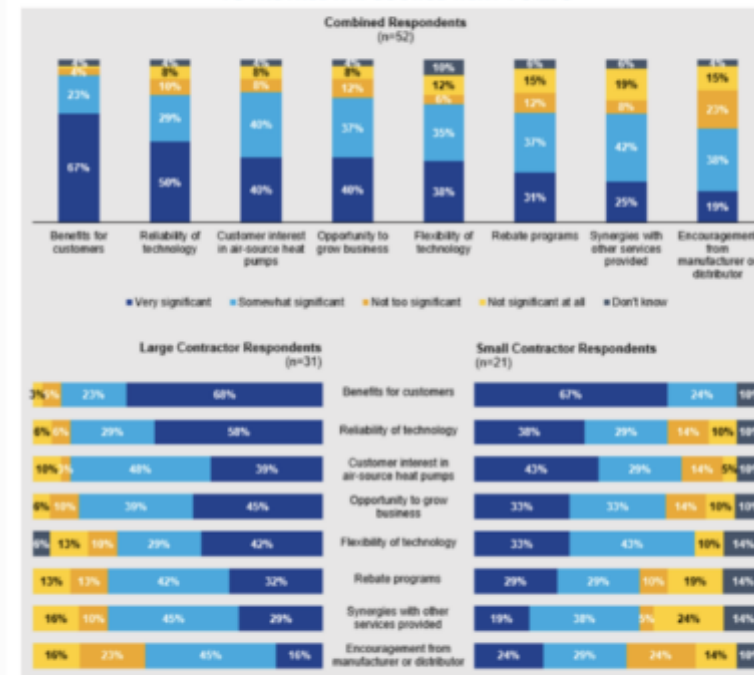
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# Clean Heat Connect Upstream Partner Network

## Clean Heat Connect

Clean Heat Connect is a network of distributors and manufacturers dedicated to expanding the adoption of heat pumps in homes across New York State. Find distributor and manufacturer hosted trainings, learn about sales and marketing strategies, and explore resources from NYSERDA, NEEP and trusted partners.

[VIEW ALL INSTALLER RESOURCES >](#)



### Manufacturers



### Distributors



<https://cleanheatconnect.ny.gov>

# Clean Heat Connect Resources

## ASHP FIELD ASSESSMENT HOT LIST

Clean Heat Connect

NYS Clean Heat  
STATE OF OPPORTUNITY. Supported

NYS Clean Heat's ASHP field assessments verify installed ASHP assessment scores by following the tips below:

### SNOW PROTECTION

Prepare for Snow - from Above and Below

- 1) Outdoor units must be positioned so they do not get buried in snow.
- Use foam, boards, or walk-boards within 6", 12", or 18" based on the local snow load.
- Place the unit under a dock or porch roof.
- 2) Outdoor units must be protected from excessive snow and ice from above.
- gutter is sufficient with vertically-aligned fans. Roof slides and stuff can be blown in.
- Place the unit on a gable end, with no snow or rain drip.
- Place the unit completely under an overhang so the drip line enters.
- Cover the unit with a snow shield (ensuring sufficient airflow).

### INDOOR UNIT CLEARANCE

Room for Airflow and Access

Follow the Installation Manual to ensure all clearances are maintained.

### REFRIGERANT

- Insulate to the U
- Use UTE
- Preserve

Each assessment receives a score and an associated Site Assessment Report. Any non-conformances observed will be shown in a Corrective Action Report.

TO LEARN MORE, VISIT:  
[www.ny.gov/cleanheat](https://www.ny.gov/cleanheat)

## Heat Pump Home Runs

- Air Source Heat Pump
- 1.5 Story Cape Cod Home

### Existing Duct Work Evaluation

If the answer to any of the questions below is "no" then the distribution system is not in good working order and likely needs modification or replacement to accommodate a ducted heat pump.

- a Is the duct system physically okay with the fan and?
- b Is the duct work sealed?
- c Is the duct work free from pinholes in cavity returns?
- d Does the current duct system provide adequate airflow for heating with a heat pump?

### Follow Best Practices!

- Measure system airflow to get a baseline
- Perform a Manual D to determine required duct sizing

### Which heat pump design is right for this home?

a The ducted distribution in hard working order (or can be functionally modified in place)?

Yes

No, does not have room work within its installation.

Recommendation - Ducted + Ductless: Ducted system using existing ducts where possible. Use additional ductless to serve bedrooms on second floor.

Recommendation - Ductless: Several ductless systems to serve each zone of the house.

## Project Pricing Checklist

Customer Name/Address: \_\_\_\_\_

### MATERIALS

SYSTEM CONSIDERATIONS	OUTDOOR UNIT CONSIDERATIONS
Y / N Extra refrigerant line (>25 feet)	Y / N Snow stand \$ _____
□ Liquid Line Ft. _____ \$ _____	Y / N Snow shield (under eave) \$ _____
□ Suction Line Ft. _____ \$ _____	Y / N Line hide Ft. _____ \$ _____
Y / N Condensate pump \$ _____	Materials Total \$ _____
Y / N Refrigerant line insulation (UV-protective) Ft. _____ \$ _____	

### INDOOR UNIT CONSIDERATIONS

Y / N Additional condensate line Ft. _____ \$ _____	
Y / N Condensate pump \$ _____	

### ELECTRIC

Y / N Wiring cost - 14/4 shielded copper wire Ft. _____ \$ _____	Y / N Is there sufficient panel capacity □ Service upgrade \$ _____
Y / N Are there sufficient breaker slots	Electric Total \$ _____
□ Add tandem breaker \$ _____	
□ Add subpanel \$ _____	
□ Add circuit sharing device \$ _____	

NEW YORK STATE OF OPPORTUNITY. | NYS Clean Heat Supported

## JOIN THE NYS CLEAN HEAT PROGRAM

Join the NYS Clean Heat Program to provide clean, comfortable, and economical heating and cooling to your customers.

### Provide rebates to your customers

### Earn contractor rewards for your HVAC installations

Incentives offered in NYSEG, RG&E, National Grid, Central Hudson, Orange & Rockland, and Con Edison electric territories.

Incentives are available for installation of cold-climate air-source heat pumps (ASHP), ground-source heat pumps (GSHP) (geothermal), and heat pump water heaters (HPWH).

### ASHP Installer Application Materials

- Two-Minute Online Application
- Utility-Specific Participation Agreement\*
- Utility-Specific General Liability COI\*
- Copy of W9
- ASHP Manufacturer-Sponsored Installation Training Certificate
- ASHP Manufacturer-Sponsored Cold Climate ASHP Sizing/Design Training Certificate
- EPA 608 Technician Certificate

### GSHP Installer Application Materials

- Two-Minute Online Application
- Utility-Specific Participation Agreement\*
- Utility-Specific General Liability COI\*
- Copy of W9
- International GSHP Association (IGSHPA) Training Certificate

### HPWH Installers

- Apply for Incentives Without Program Enrollment

Apply to become a participating contractor now

**VISIT:**

For more information, please email [NYSCleanHeat@icf.com](mailto:NYSCleanHeat@icf.com) or call 1-844-212-7823

Logitech | Intel | Dell | National Grid | Eversource | Con Edison | Orange & Rockland | Central Hudson | NYSEG

\*Separate COIs and Participation Agreements for each utility are required for operation in those territories. You can apply to work in as few or as many utilities as you would like, and use the utility-specific documents and apply to your approved territories.

# Short Take Videos (installation and marketing)

## Installation

Learn the best installation techniques from professional heat pump installers.



### Flare Fitting

Learn best practices for creating a long-lasting, durable flare connection.



## Sizing, Design, and Product Selection

Key Takeaways:

1. Manual J is the industry standard for accurately sizing a heat pump system.
2. Trust your Manual J — there is no need to oversize a heat pump system, especially when the house is properly insulated.
3. Pick a heat pumps that has enough capacity at the heating design temperature to cover the load. It's not enough to look at the nominal capacity because heat pumps lose capacity as it gets colder — and some more than others.
4. Customers are regularly reporting increased savings and comfort, valuable feedback that can help you sell more units.
5. Ask your customers what their needs are — there are a variety of heat pumps that can be mixed and matched to meet your customer's needs.

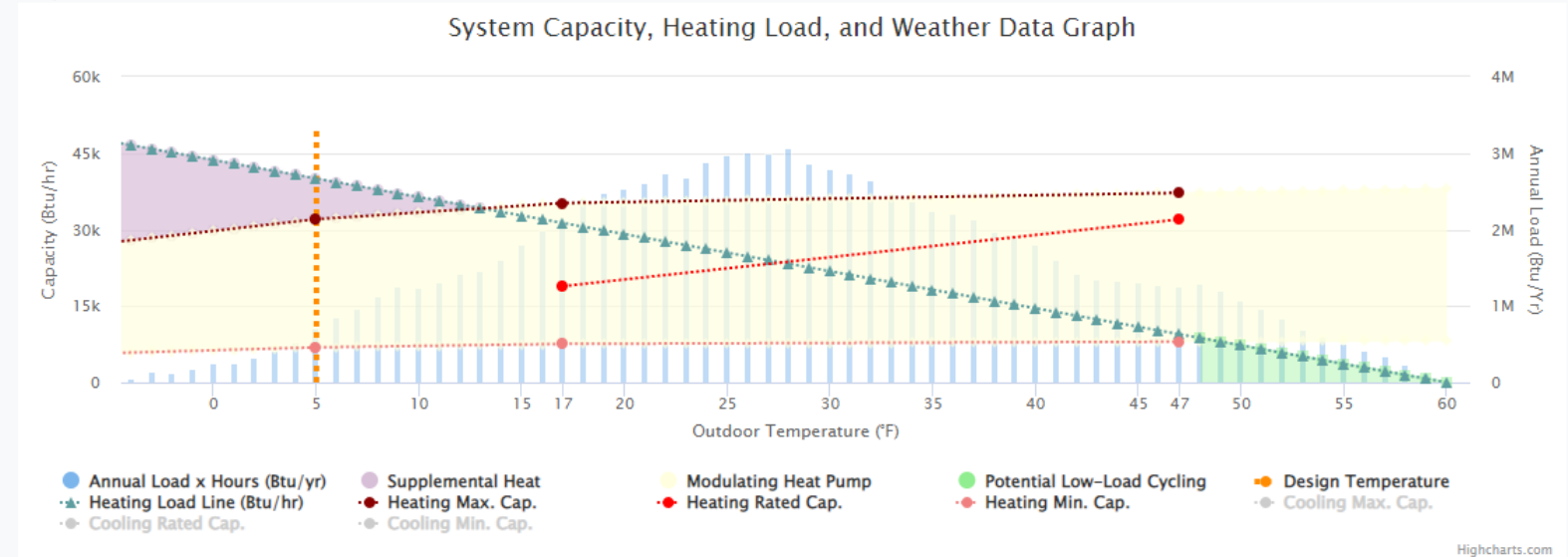
# ccASHP Equipment Selection Visualization Tool

[ashp.neep.org](http://ashp.neep.org)

Select “Advanced Search – Sizing for Heating”

Teaching tool, helps technicians understand and assess seasonal performance trade-offs for variable speed heat pump equipment

Graph Information ⓘ



## Product Sizing For Heating

Field Information ⓘ

Capacity Balance Point (°F)	13
Minimum Capacity Threshold (°F)	48
Maximum Capacity at Design Temp (Btu/hr)	32,040
Percent Design Load Served	80.1%
Annual Heating Load (MMBtu)	96.8
Percent Annual Heating Load Served	90.1%

Field Information ⓘ

Annual Btu's Covered by Supplemental Heat (MMBtu)	9.6
Hours Requiring Supplemental Heat	295
Percent Hours Requiring Supplemental Heat	4.9%
Percent Annual Load Modulating	81.4%
Percent Annual Load with Low-Load Cycling	7.3%



# Get Homes Heat Pump Ready

- **Comfort Home:** Develop and promote building envelope packages for consumers, in coordination with utilities
- **Reduce Customer Acquisition Costs:** Simplify envelope packages and incentives to reduce customer acquisition costs
- **Increase Contractor Base:** Support new business models and enable more businesses to offer envelope and heat pump services
- **Utility Coordination:** Provide additional heat pump incentives following installation of envelope improvements

# Summary

# Questions?

Contact:

[Courtney.Moriarta.nyserda.ny.gov](mailto:Courtney.Moriarta.nyserda.ny.gov)

**New York State is leading the way for cold climate housing decarbonization solutions**

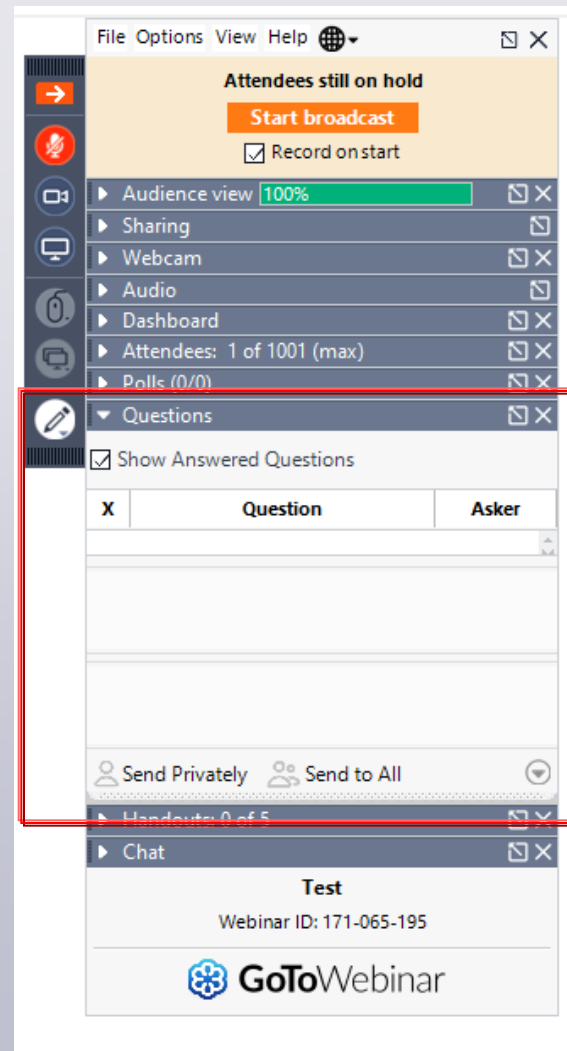
**Multi-disciplined, Multi-faceted Approach:**

- Build Consumer Demand
- Support LMI Market Segment
- Develop a Supply Chain
- Get Homes Heat Pump Ready

**Key Strategies:**

- Build industry partnerships early
- Listen and learn from the market, design solutions that respond to their needs
- Look for low cost, high impact opportunities
- Learn and iterate

# Discussion: Share Your Questions



Please use the **questions box** to submit questions, comments, or alert us of technical difficulties



**Zachary Strauss**  
**Atlas Public Policy**

# THE U.S. HEAT PUMP MARKET: THEY'RE COMING IN HOT

Zachary Strauss

December 8, 2022

Better Building Residential Network



*A DC-based policy tech firm established 2015*

Atlas Public Policy equips businesses and policymakers to make **strategic, informed decisions that serve the public interest**. Atlas builds analytical tools and dashboards using powerful, accessible technology, and offers expert advisory services to tackle the pressing issues of the day.

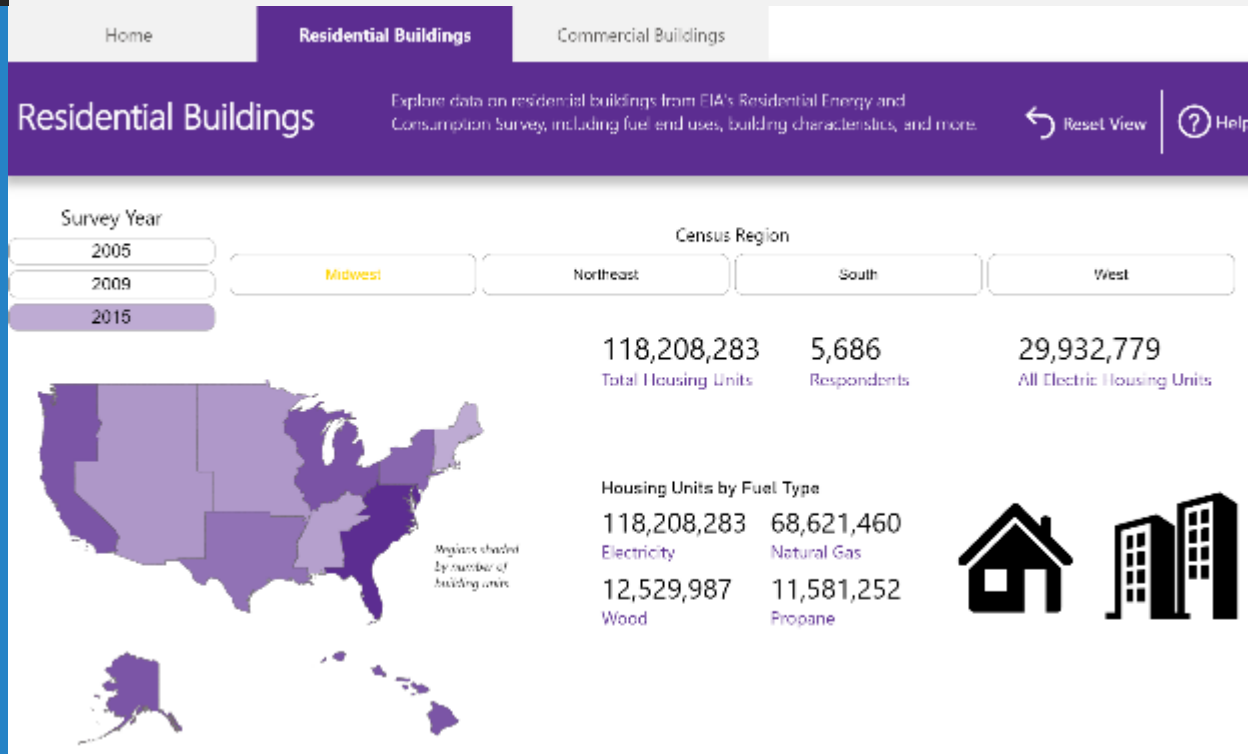
Transportation

Buildings

Climate

Disinformation

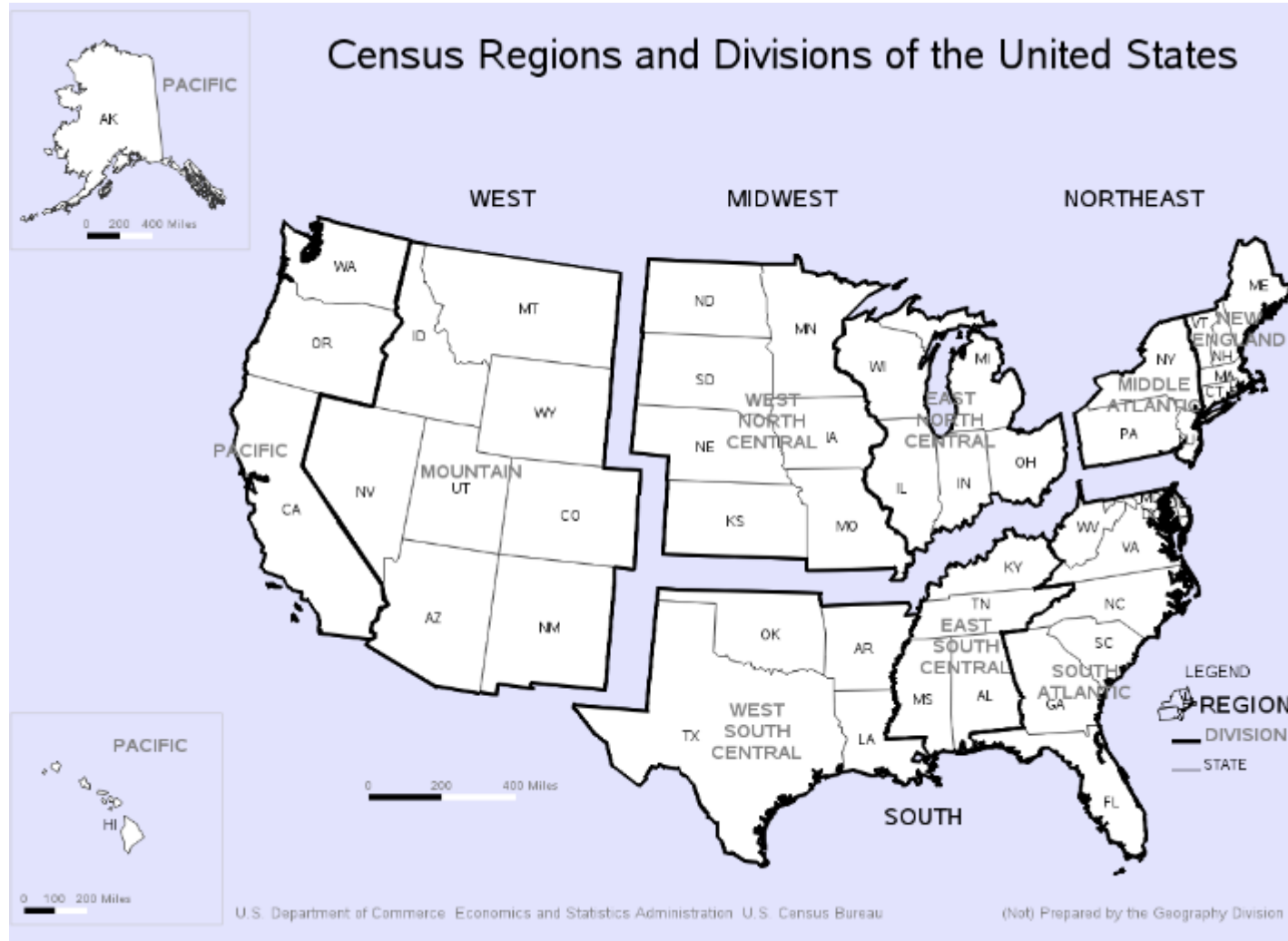
# ABOUT BUILDINGS HUB



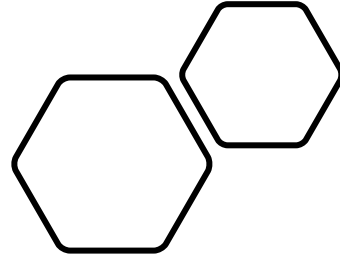
- Gives stakeholders easy access to key data and information
  - Buildings Stock
  - Fuel Prices
  - State & Federal Policy
  - Funding Programs
  - & More
- Used by businesses, policymakers, and advocates
- **Free for public agencies and select 501c3 nonprofit organizations**

Join today:  
[www.atlasbuildingshub.com](http://www.atlasbuildingshub.com)

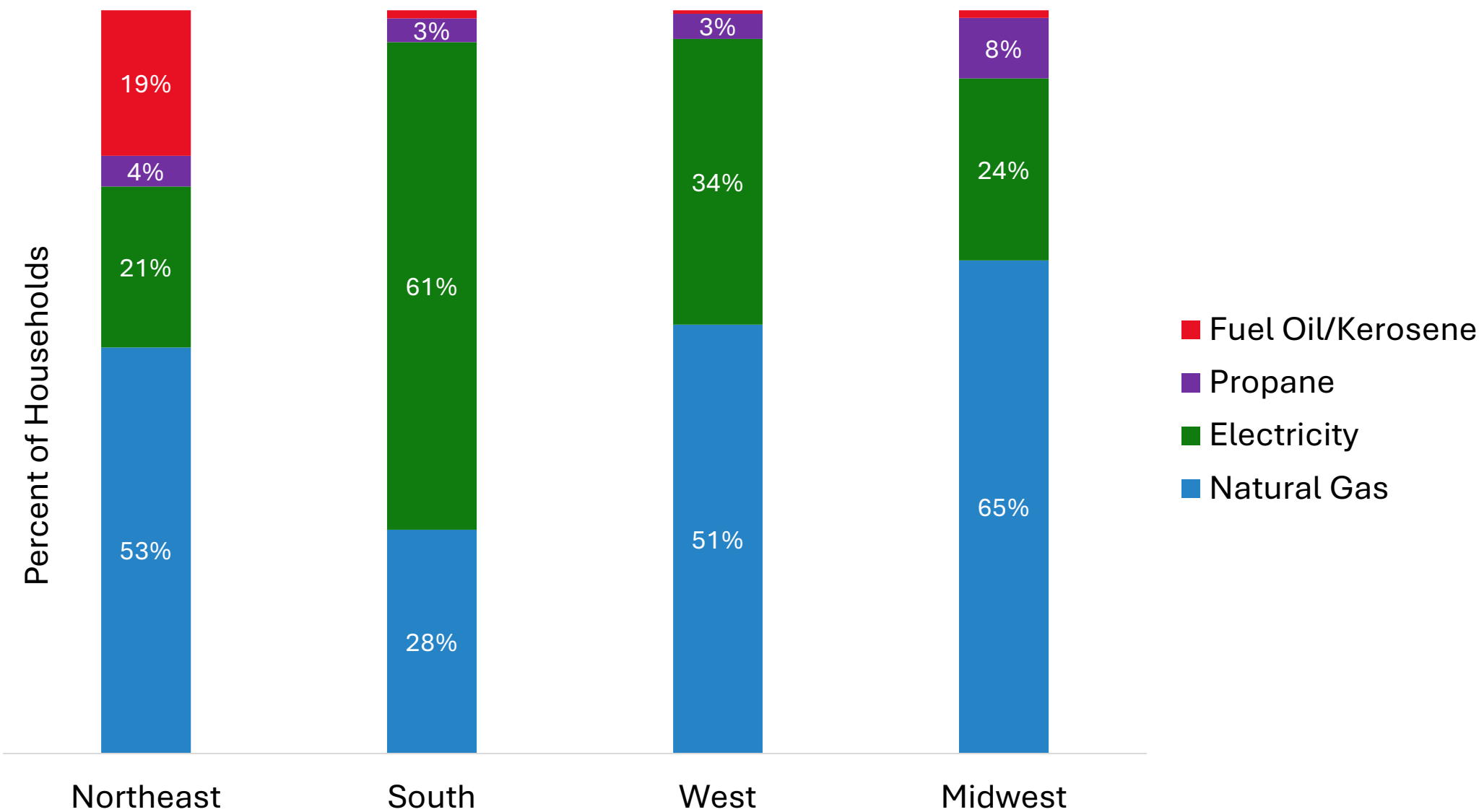
# U.S. CENSUS REGIONS USED IN RECS SURVEY DATA



# NATIONAL HOME HEATING OVERVIEW

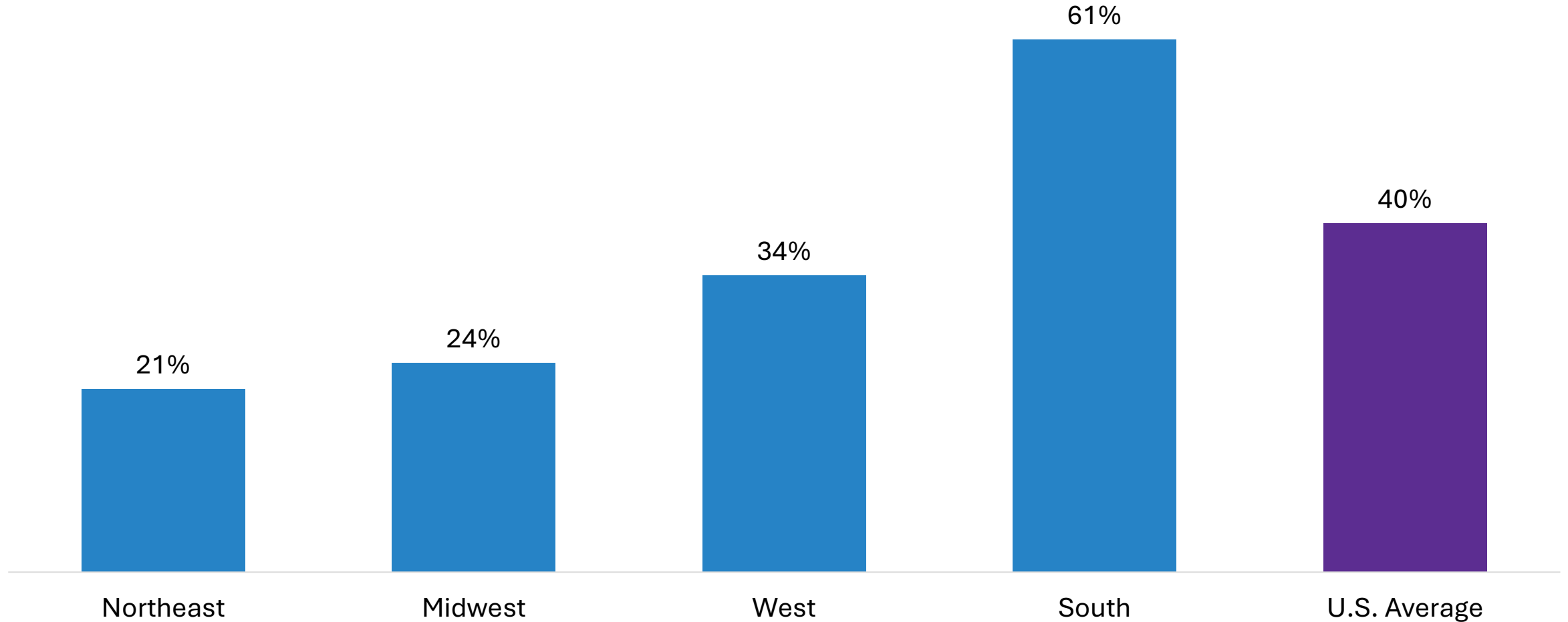


# Primary Home Heating Mix by Fuel and Census Region (2020)



# Two out of five U.S. households use electricity for primary space heating

Percent of region households with primary electric heating (2020)

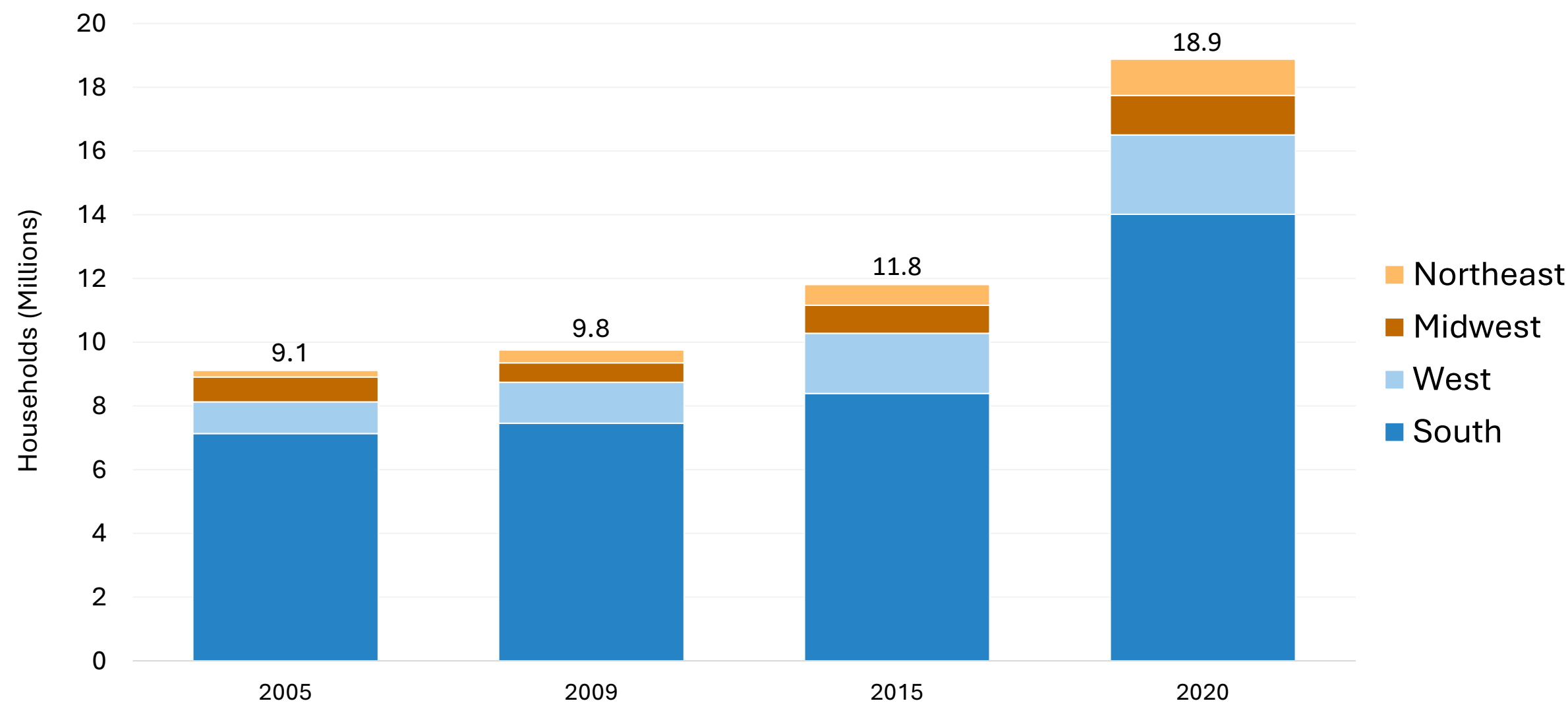


The background of the slide is split. The left half features a complex, low-poly geometric pattern in various shades of blue, ranging from dark navy to light sky blue. A thick, white curved line separates this patterned area from the right half. The right half is a solid, dark charcoal grey.

# NATIONAL HEAT PUMP OVERVIEW

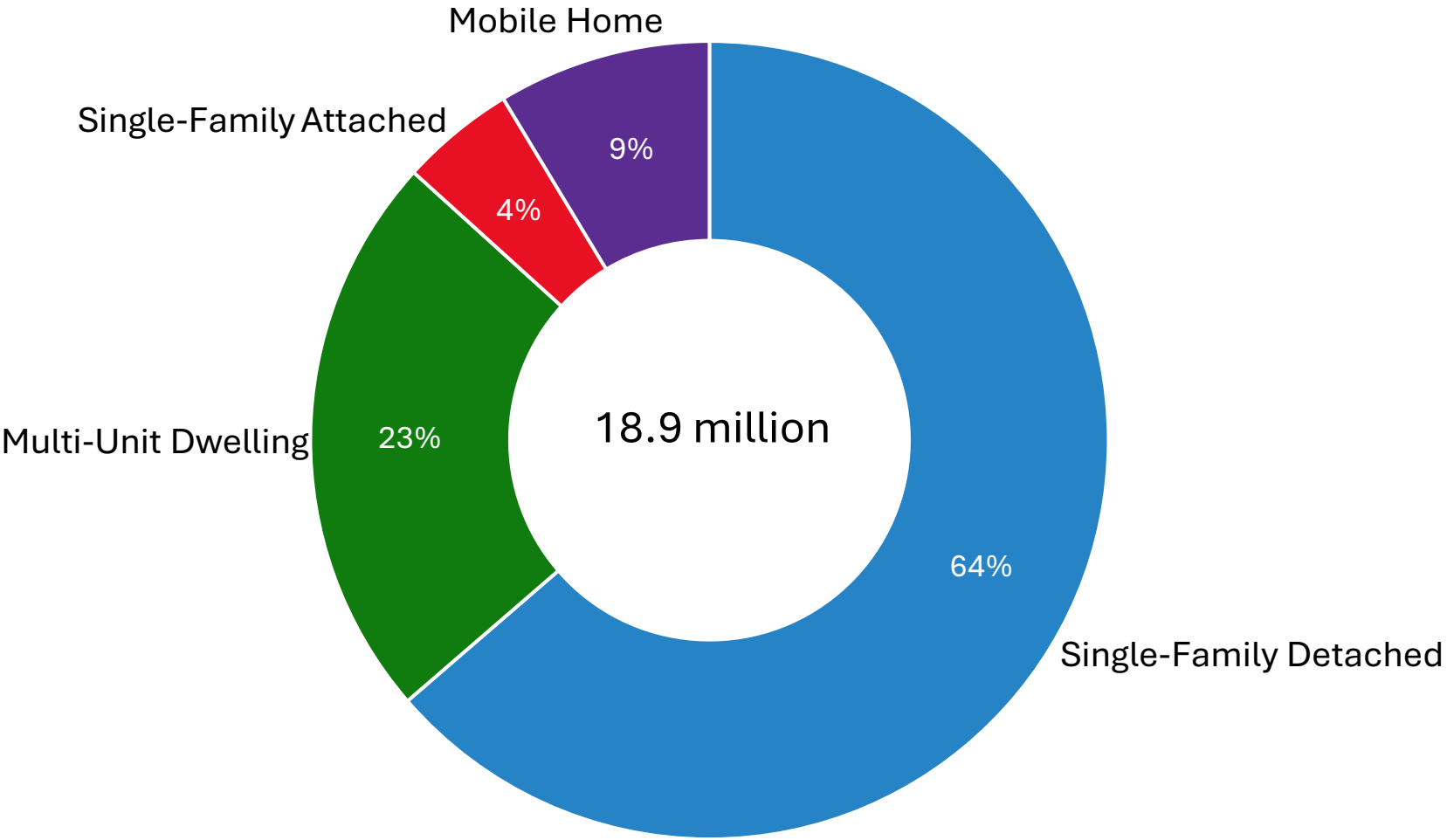
# Number of U.S. households with primary heat pumps doubled over 15 years

Households with heat pumps as main heating equipment by region between 2005 and 2020 (millions)



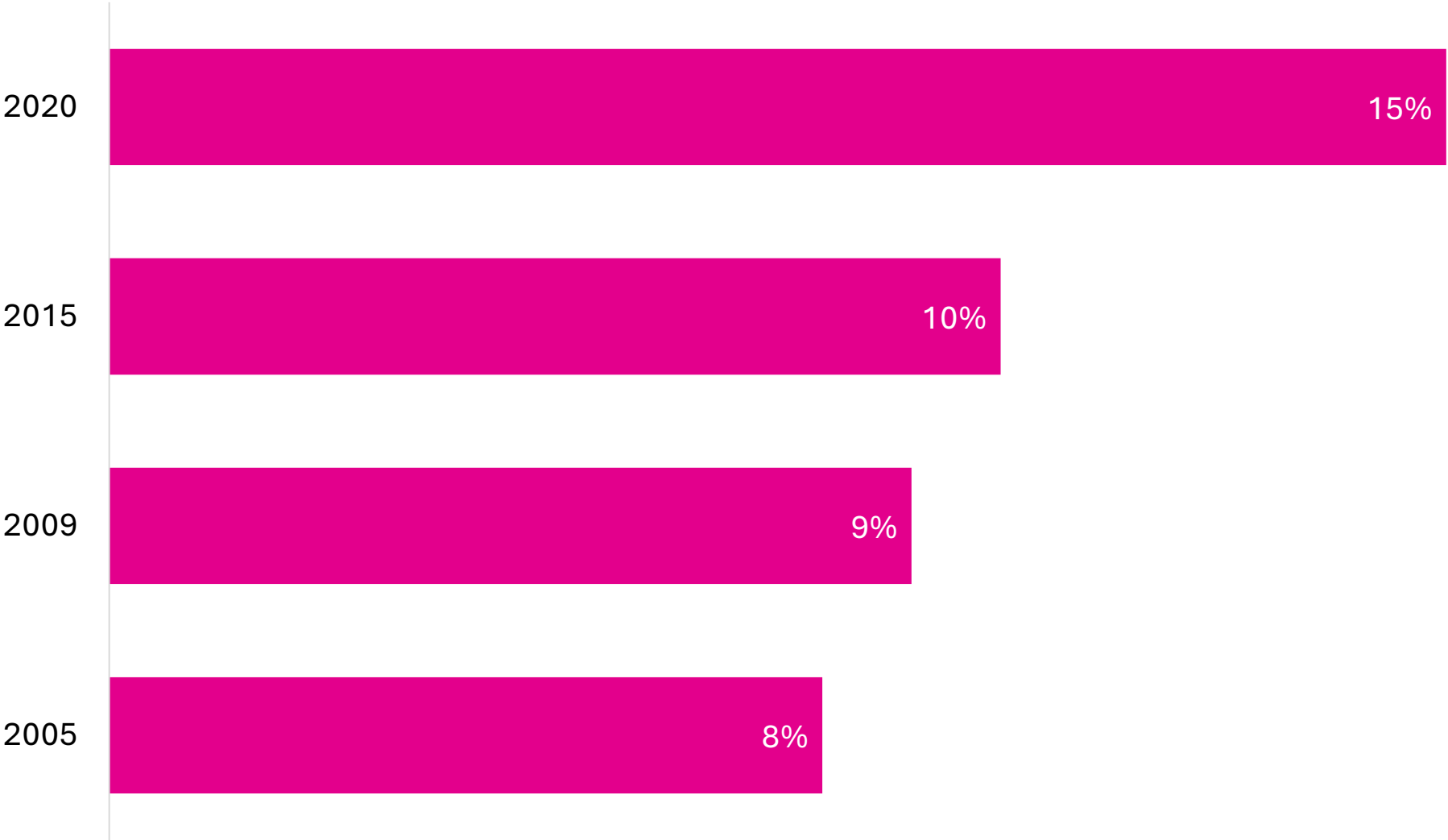
# Two-thirds of heat pumps in stand-alone, single-family homes

Share of U.S. households with primary electric heat pumps, by housing type



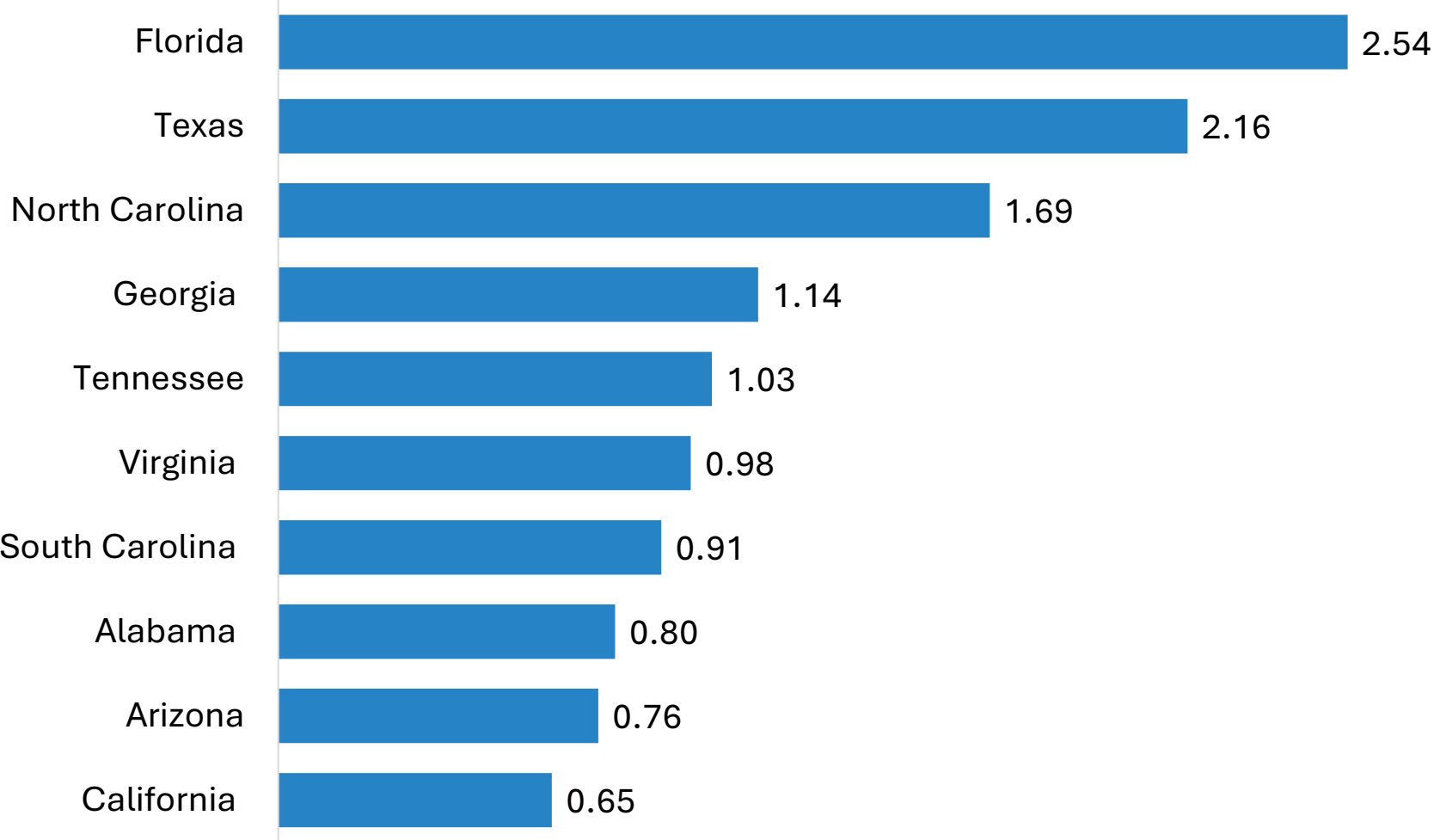
Source: EIA RECS Survey 2020 | Analysis: Atlas Public Policy

# Percent of U.S. Households with Primary Electric Heat Pumps (2005-2020)



# Southern states sweep heat pump deployments in absolute numbers

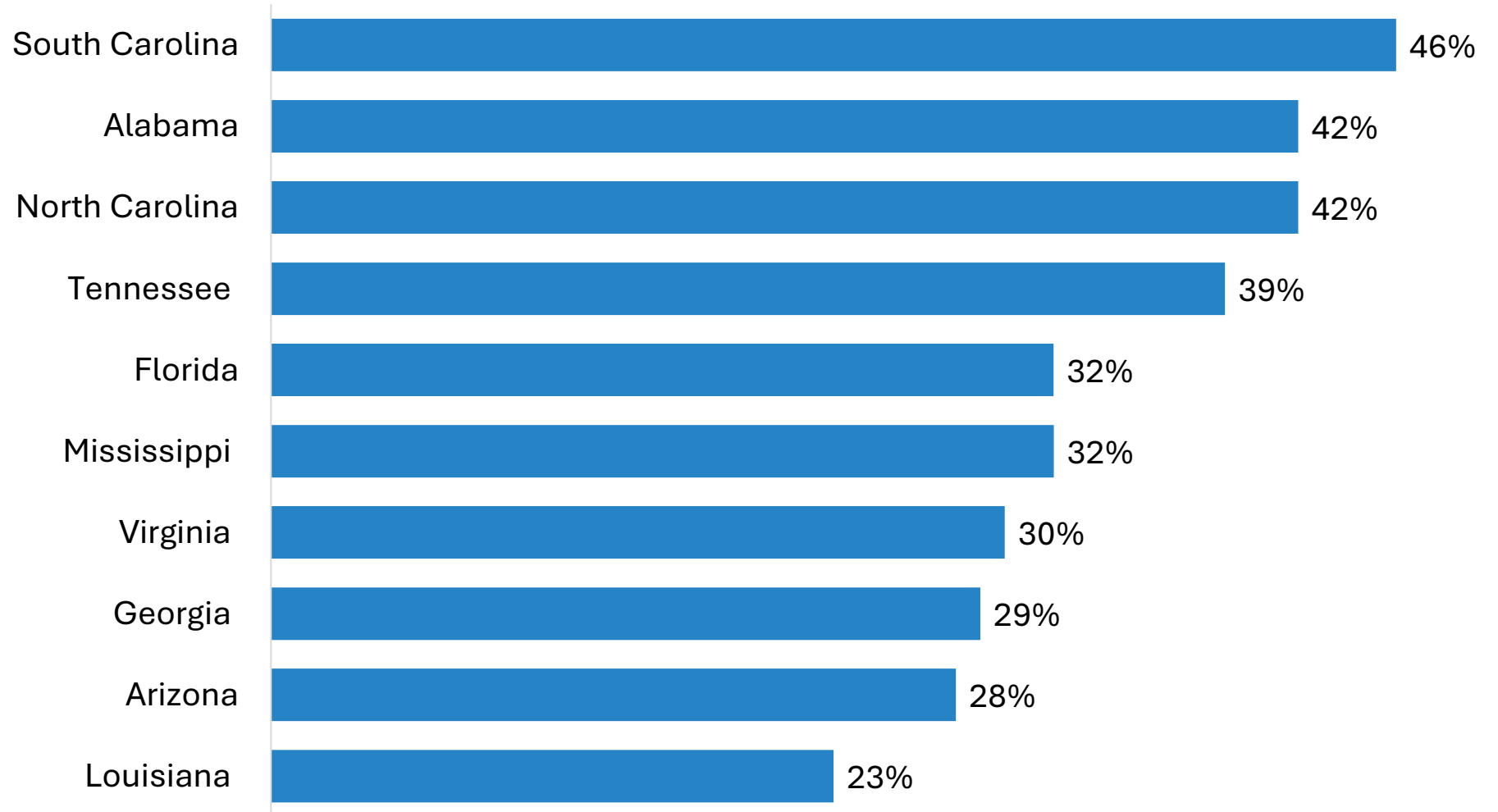
Households with central heat pumps as primary space heating equipment by state in 2020 (millions)



Source: EIA RECS Survey 2020 | Analysis: Atlas Public Policy

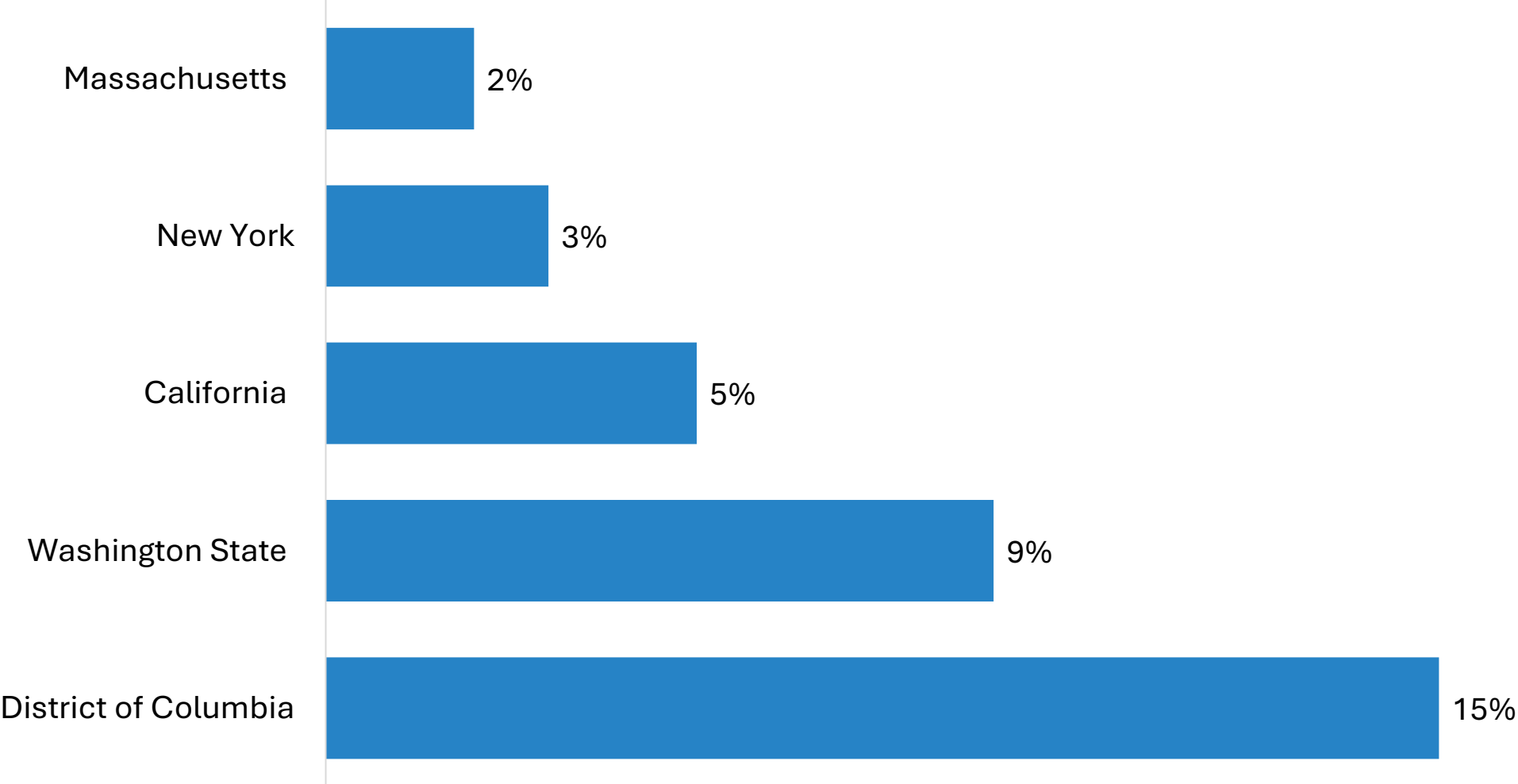
# Southern states have highest residential heat pump uptake

Share of state households with primary central heat pumps for space heating (2020)



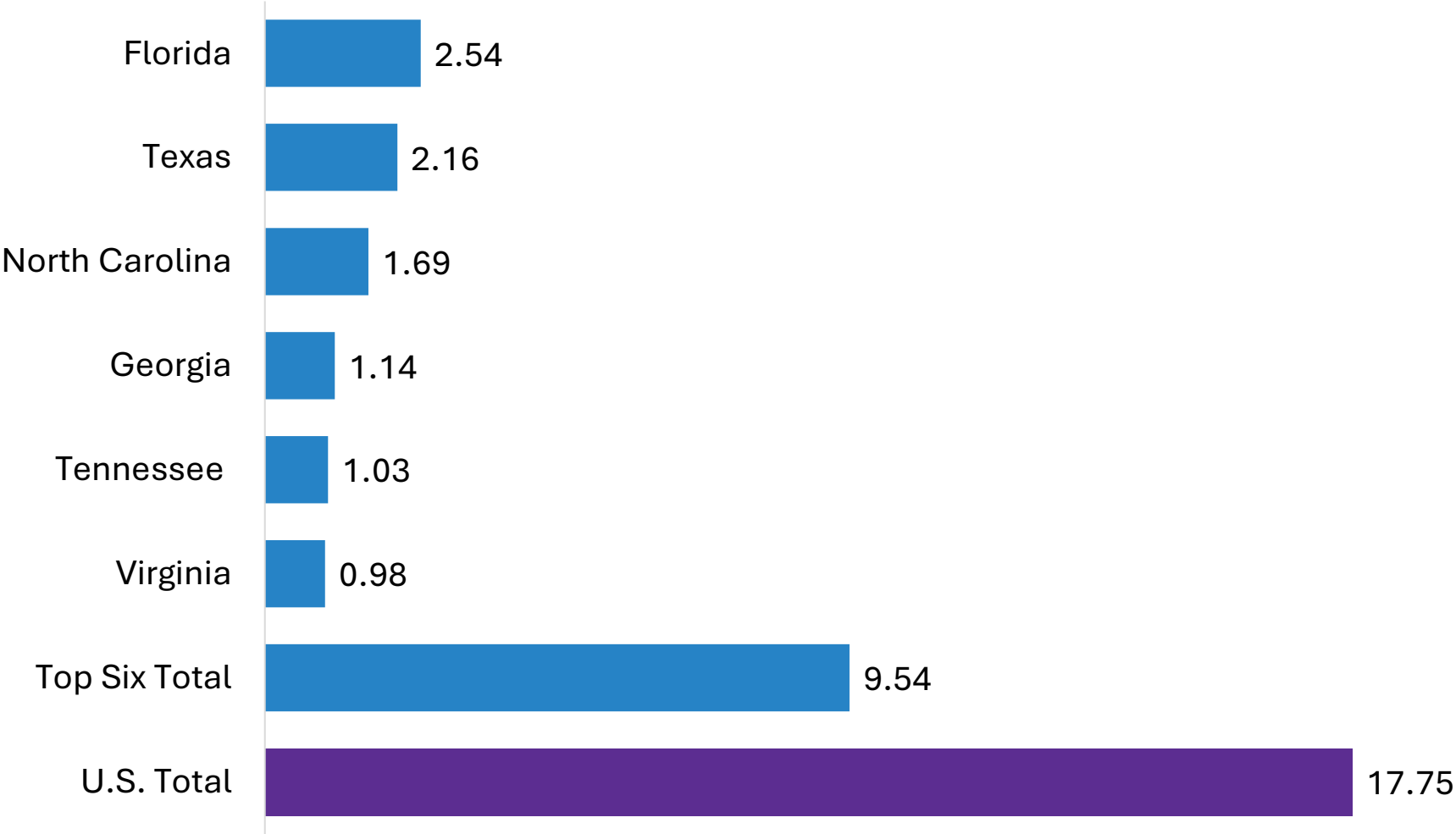
# Policy-Forward Electrification States Lag Behind in Heat Pump Deployment

Share of state households with primary central heat pumps for space heating (2020)



# Over half of central heat pumps in U.S. concentrated in six states (2020)

Households with central heat pumps as main space heating equipment by state (millions)



Source: EIA RECS Survey 2020 | Analysis: Atlas Public Policy



# FEDERAL POLICIES AND PROGRAMS

*Photo: Unsplash/Syed F Hashemi*

# DEFENSE PRODUCTION ACT

President Biden Issued an Executive Order in June 2022 to invoke Defense Production Act, which will accelerate production of five key clean energy technologies, notably heat pumps and insulating material

\$250 million specifically allocated in Inflation Reduction Act to implement Defense Production Act; will support rapid production of heat pumps in conjunction with the Executive Order

# DEPARTMENT OF ENERGY REGULATIONS

- Federal Building Performance Standard (30% electrification by 2030)
- DOE proposed new gas furnace efficiency standard of >95% for 2029, which would encourage adoption of heat pump technology
- First update to gas furnace efficiency standard since 1987
- DoE updated mobile home efficiency standards, particularly pertaining to insulation and sealing



# RECENT DEPARTMENT OF ENERGY GRANT PROGRAMS

Community Geothermal  
Heating/Cooling Design &  
Deployment  
(\$13 Million, Applications  
Closed October 2022 )

Clean Energy Technology  
Deployment on Tribal  
Lands  
(\$20 Million, Currently  
Open)

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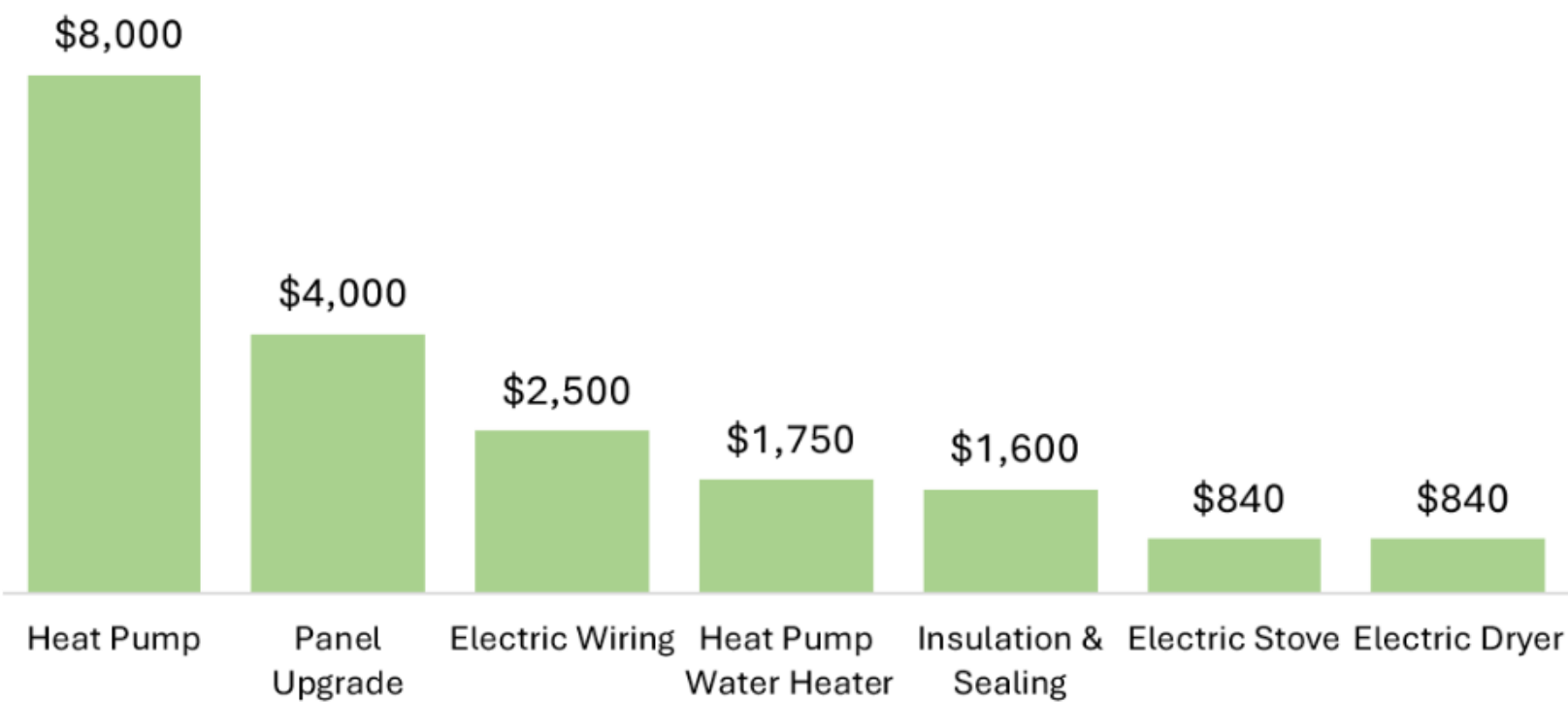
# INFLATION REDUCTION ACT

## Tax Credits

- **Residential Clean Energy Credit (25D)**
  - 30% subsidy on purchase and installation of geothermal heat pump
  - Credit is annual over 10-year period, but not refundable
- **Nonbusiness Energy Property Credit (25C)**
  - Provides up to \$1,200/year for efficiency improvements (windows, doors, sealing, panel upgrades) at \$600 per project
  - Provides \$2,000 for air-source heat pump or HPWH
  - Credit is annual over 10-year period, but not refundable
- **New Energy-Efficiency Home Credit (45L)**
  - Provides developers between \$2,500 – \$5,000 to construct energy-efficient single-family homes
  - Between \$500-\$1,000 per multifamily unit (\$2,500-\$5,000 with prevailing wage adder)

# HIGH-EFFICIENCY ELECTRIC HOME REBATE ACT (HEEHRA)[\$4.275 BILLION]

Max Point-of-Sale Rebate Amounts Per Upgrade (Dollars)



- Point-of-sale electrification rebate program expiring in 2031
- Specifically for low- and middle income homeowners and renters; applies to single and multifamily households
- Covers 100 percent of costs for low-income earners, 50 percent for middle income (includes installation costs)
- Maximum rebate per household is \$14,000
- Contractors entitled to \$500 rebate

Source: Inflation Reduction Act Section 50122 | Analysis: Atlas Public Policy

# ELIGIBLE FEDERAL GRANT FUNDING FOR RESIDENTIAL ELECTRIFICATION

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Total: \$49 billion

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Inflation Reduction Act: \$35.6 billion

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Infrastructure Investment and Jobs Act: \$2.8 billion

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FY22 Annual Appropriations: \$10.6 billion

# PANEL UPGRADES LIKELY NECESSARY FOR MOST HOMES

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HVAC appliance replacements have second-highest load impact on home capacity, after electric vehicles

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200-amp panel necessary to fully electrify home; average all-fossil home panel is 100 amps

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35-40 million homes in the U.S. can electrify everything without a panel upgrade; 48 million homes will require a larger panel



# STATE & LOCAL DEVELOPMENTS

# 2022 WAS A WATERSHED YEAR FOR ELECTRIFICATION ORDINANCES

## Statewide Electrification Ordinances:

Washington State, California,  
[Washington, DC]

## Local Electrification Ordinances:

New York City, Los Angeles,  
San Diego, Marin County,  
Montgomery County, 10-City  
Mass Pilot, Crested Butte

These policies authorize jurisdictions to prohibit the use of gas or delivered fuels in new construction, or otherwise require electric appliances be installed in new builds starting at specified enactment dates. This could apply to space heating, water heating, cooking, or any combination.

# STATE EFFORTS TO DEPLOY RESIDENTIAL HEAT PUMPS

**WA:** Building Electrification [Grant Program](#) (\$9.7 million)

**CO:** Property/Sales Tax Exemptions for Heat Pumps; High Efficiency Electric Heating and Appliances [Grant Program](#) (\$10.85 million); Geothermal Energy [Grant Program](#) (\$12 million)

**NY:** Geothermal Heat Pump [Tax Credit](#) (25%, Up to \$5,000)

**CA:** California Electric Homes [Program](#) (\$75 million); [BUILD](#) program (\$80 million)

**MA:** Triple Decker [Retrofit Pilot](#) (\$2.2 million)

# UTILITY REBATES PLAY MAJOR ROLE IN RESIDENTIAL ELECTRIFICATION

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[Consolidated Edison](#) (Structure to change): Up to \$25,000 for 5-ton geothermal system (\$5k/ton, +30% in West Chester)

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[MassSave](#): \$10,000 for air source/\$15,000 for groundsource

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[Commonwealth Edison](#): \$6,000 for groundsource heat pump/\$2,000 for air source

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[LA Dept of Water & Power](#): Up to \$3,000 for central heat pump

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[Efficiency Trust Maine](#): Up to \$2,400 for heat pumps

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[Puget Sound Energy](#): \$1,500 for air-source heat pump

# WORKFORCE DEVELOPMENT CRUCIAL TO NATIONWIDE BUILDING ELECTRIFICATION



**Without skilled heat pump workforce,** full-scale electrification will be challenging



**Key leaders:** Elevate, Dandelion Energy, BlocPower, Egg Geothermal, Sealed



**Estimated \$11.2 billion** eligible through IRA and IIJA to build green building workforce



ATLAS  
PUBLIC POLICY

WWW.ATLSPOLICY.COM  
WASHINGTON, DC USA

Zachary Strauss  
zachary.strauss@atlaspolicy.com

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U.S. DEPARTMENT OF  
**ENERGY**

# Explore the Residential Program Guide

Resources to help improve your program and reach energy efficiency targets:

- [Handbooks](#) - explain *why* and *how* to implement specific stages of a program.
- [Quick Answers](#) - provide answers and resources for common questions.
- [Proven Practices](#) posts - include lessons learned, examples, and helpful tips from successful programs.
- [Technology Solutions](#) **NEW!** - present resources on advanced technologies, **HVAC & Heat Pump Water Heaters**, including installation guidance, marketing strategies, & potential savings.
- [Health + Home Performance Infographic](#) **NEW!** – spark homeowner conversations.



<https://rpssc.energy.gov>

# Health + Home Performance Infographic

**Do You Have a “Healthy Home?”**

A qualified contractor can help you assess and address indoor air quality, improve your comfort, and cut your utility bills.

Answers to a few basic questions can help you get started:

- **How old are your heating and cooling systems?**  
Ensuring your system is updated and well maintained can save money and improve health and comfort.
- **Is your home insulated?**  
Properly installed insulation in your walls and attic, at levels recommended for your home's climate, will cut bills, and improve comfort.
- **Have you ever noticed mold in your home?**  
Visible mold likely means humidity levels need to be better addressed or indicates a potential leak or water damage.
- **Are your windows caulked and doors weather-stripped?**  
These relatively simple fixes reduce air leaks and help maintain indoor temperature levels.
- **Are your appliances ENERGY STAR® rated?**  
ENERGY STAR appliances are energy efficient and help you save money.
- **Do you know if your home's heating and cooling systems include proper levels of ventilation?**  
Effective ventilation is important for both health and safety. Ventilation, along with frequently replaced air filters, can help make sure your home is bringing in fresh air as needed, and keep out pollutants when outdoor air quality is poor due to ozone, fire, or other factors.

**GET started**

**FIND A QUALIFIED CONTRACTOR:**

- Home Performance with ENERGY STAR® at [ENERGYSTAR.gov/HomePerformance](http://ENERGYSTAR.gov/HomePerformance)
- Building Performance Institute at [bpi.org/locator-tool](http://bpi.org/locator-tool)

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BUILDING TECHNOLOGIES OFFICE

DOE/EE-2349

HOME PERFORMANCE WITH ENERGY STAR

DOE’s new Health + Home Performance Infographic reveals the link between efficiency and health – something everyone cares about. Efficiency programs and contractors can use the question-and-answer format to discover a homeowner’s needs.

The infographic is ideal for the “kitchen table” conversations where people decide what to do – and who they want to do it. It also has links for homeowners to find a qualified contractor if they do not already have one.

[Download](#) this infographic from DOE’s Better Buildings Residential Network.

# Thank You!

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